

Work Order ID 84890

May-29-12 1:03:35 PM

Item ID: D209-669-013

Accept

84890

Revision ID:

Item Name: Skidtube LH

Start Date: 29/05/2012 Start Qty: 1.00 *1*

Required Date: 16/07/2012 Req'd Qty: 1.00 *1*

Reference:

Approvals: Process Plan: MLJ

Date: 12/05/3DTooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D209-669-013	Rev B
--------------	-------

DSI 9450	Rev A
----------	-------

100 *100* DOCUMENT CONTROL 0.00

DC Memo 0.00

Document Control Photocopy bluefile & type labels per PPP d209-669-013 CHG003

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Packaging Memo 0.00

Packaging

1384929

110 *110* Pick Kit 0.00

Cust Item ID:
Customer:

Page 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 84890

May-29-12 1:03:35 PM

Item ID: D209-669-013

Accept

84890

Revision ID:

Item Name: Skidtube LH

Start Date: 29/05/2012 Start Qty: 1.00 *1*

Required Date: 16/07/2012 Req'd Qty: 1.00 *1*

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC	QC4- 100% Inspect kits for completeness Quality Control	0.00 0.00 9-83	DAS 16	12/07/12					

130

130

Packaging

Packaging

0.00

Packaging

Memo

0.00

Identify and pack for shipping as per PPPD209-669-013
Location: SWIP

12/07/12 C

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

12/07/18 JJ

MM
12-07-18

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-29-12 1:03:39 PM

Page 1

Work Order ID: 84890

84890
D209-669-013

Parent Item: D209-669-013

Parent Item Name: Skidtube LH

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: New IPP 08.02.13 LL, verified by:DD
IPP Rev:B 08-05-20 chg QTY of D2570 DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D209-669-043		Manufactured	No			110	Each	2.0000	1	1	B84929		

D209-669-043

Replacement Skidtube

Location	Loc Qty	Loc Code
----------	---------	----------

Mezz	2	
39205	1	
39206	1	

D2917-1

D2917-1

Saddle LH

D2918-1

D2918-1

Saddle LH

AN4-51A

AN4-51A

Bolt

Location	Loc Qty	Loc Code
----------	---------	----------

ST424	3	
54467	3	

ST424	3	
54467	3	

Location	Loc Qty	Loc Code
----------	---------	----------

362	200	
121181	200	
ST361	102	
119798	30	
121584	72	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-29-12 1:03:39 PM

Page 2

Work Order ID: 84890

84890
D209-669-013

Parent Item: D209-669-013

Parent Item Name: Skidtube LH

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

D2570

Manufactured

No

110

Each

711.0000

24

24

**

B85411 SP

D2570

Bushing

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST011	711	
72960	41	
78586	9	
79493	12	
81956	24	
81957	400	
82874	225	

MS21042L4

Purchased

No

110

Each

4,095.000

24

24

**

SP

MS21042L4

Nut

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST300	4095	
119075	125	
121011	713	
121444	2957	
121652	300	

AN5-36A

Purchased

No

110

Each

184.0000

4

**

24X

AN5-36A

Bolt

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
340	134	
121181	34	
121652	100	
ST340	50	
121708	50	

AN960JD516

NAS1149D0563J Purchased

No

110

Each

0.0000

8

**

4X

AN960JD516

Washer

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-29-12 1:03:40 PM

Page 3

Work Order ID: 84890

84890
D209-669-013

Parent Item: D209-669-013

Parent Item Name: Skidtube LH

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased No 110 Each 1,447.000 4 4

**

S *MS21042L5*
Nut



Location	Loc Qty	Loc Code
----------	---------	----------

300	500	
121652	500	
ST300	947	
108827	8	
116105	5	
116548	43	
117611	18	
119109	865	
17651	8	

SP

AN4-7A

Purchased No 110 Each 124.0000 16

**

S *AN4-7A*
Bolt



Location	Loc Qty	Loc Code
----------	---------	----------

ST356	124	
117514	24	
120770	100	

AN

m 122141 SP.

AN960JD416

NAS1149D0463J Purchased No 110 Each 30.0000 32

**

S *AN960JD416*
Washer



Location	Loc Qty	Loc Code
----------	---------	----------

ST351	30	
116289	10	
119097	20	

32

m 121912 SP.

12-7-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-29-12 1:03:40 PM

Page 4

Work Order ID: 84890

84890
D209-669-013

Parent Item: D209-669-013

Parent Item Name: Skidtube LH

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

D2929

D2929
Spacer

Manufactured	No	110	Each	86.0000	2	2
--------------	----	-----	------	---------	---	---

**

SP



D2930

D2930
Spacer

Manufactured	No	110	Each	102.0000	2	2
--------------	----	-----	------	----------	---	---

**

2X
SP



D3405-041

D3405-041
Lug Assembly

Manufactured	No	110	Each	6.0000	1	1
--------------	----	-----	------	--------	---	---

**

2X
B83894



AN4C47A

AN4C47A
Bolt

Purchased	No	110	Each	48.0000	4	4
-----------	----	-----	------	---------	---	---

**

m122204 SP



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-29-12 1:03:40 PM

Page 5

Work Order ID: 84890

84890
D209-669-013

Parent Item: D209-669-013

Parent Item Name: Skidtube LH

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

MS21043-4

Purchased

No

110

Each

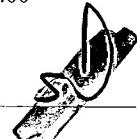
1,346.000

5

5

**

SP



MS21043-4

Nut

Location	Loc Qty	Loc Code
FG	40	
104603	40	
ST301	1306	
119546	147	
121162	659	
121652	500	

D3405-043

Manufactured

No

110

Each

2.0000

1

1

**

SP



D3405-043

Lug Assembly

Location	Loc Qty	Loc Code
ST478	2	
82038	2	

D3407-041

Manufactured

No

110

Each

27.0000

1

1

**

SP

62-1-168

D3407-041

Tow Ring

Location	Loc Qty	Loc Code
ST463	27	
82067	6	
82068	19	
82108	2	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-29-12 1:03:40 PM

Page 6

Work Order ID: 84890

84890
D209-669-013

Parent Item: D209-669-013

Parent Item Name: Skidtube LH

Start Date: 29/05/2012

Required Date: 16/07/2012

Start Qty: 1.00

Required Qty: 1.00

D3456-1

Manufactured

No

110

Each

156.0000

1

1

**

D3456-1

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	7	
25701	7	
ST044	149	
80252	1	
81876	48	
83584	100	

D3417-5

Manufactured

No

—

110

Each

78.0000

2

**

D3417-5

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST042	78	
78842	28	
83318	50	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D209-669 REV. B

INSTRUCTIONS:

1) FOR D209-669-011/-012/-013/-014 SKID TUBES @ CHANGE 003 AND SUBSEQUENT, MODIFY THE FOLLOWING:

- a) REPLACE THE D2968-041 TOW RING WITH THE D3407-041 TOW RING ASSEMBLY.
- b) REPLACE THE D2736-1 AND D2736-3 GHW LUGS WITH THE D3405-041 AND D3405-043 LUG ASSEMBLIES.
- c) AMEND THE PARTS LIST IN SECTION 5.0 OF INSTALLATION INSTRUCTIONS IIN-D209-669 REV. B AS SHOWN ON PAGE 2 OF THIS DSI.

NOTE: ALL INSTALLATION FASTENERS FOR THE ABOVE CHANGES HAVE BEEN UPDATED. SEE THE AMENDED PARTS LIST ON PAGE 2 FOR DETAILS.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COP.
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
No. 84890 MUS
12/05/30

A	NEW ISSUE		AJS	09.02.24
REV.	DESCRIPTION		BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	AJS			
CHECKED		DRAWING NO.	REV. A	
MFG. APPR.	N/A	DSI 9450	SHEET 1 OF 3	
APPROVED		TITLE	SCALE	
DE APPR.		SKIDTUBE INSTALLATIONS	NTS	
DATE	09.02.24		COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

5.0 PARTS LIST

ITEM	QTY -011	QTY -012	QTY -013	QTY -014	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
	X						D209-669-011	SKIDTUBE INSTALLATION, LH (AH-1W/J)
		X					D209-669-012	SKIDTUBE INSTALLATION, RH (AH-1W/J)
			X				D209-669-013	SKIDTUBE INSTALLATION, LH (AH-1P/F/S)
				X			D209-669-014	SKIDTUBE INSTALLATION, RH (AH-1P/F/S)
1	1				X		D209-669-041	REPLACEMENT SKIDTUBE (AH-1W/J)
		1	1			X	D209-669-043	REPLACEMENT SKIDTUBE (AH-1P/F/S)

IS:

50	4	4	1	1		D3405-041	LUG ASSEMBLY
51	8	8	4	4		AN4C47A	BOLT
52	16	16	8	8		D2570	BUSHING
53	8	8	4	4		MS21043-4	NUT
54			1	1		D3405-043	LUG ASSEMBLY
60	1	1	1	1		D3407-041	TOW RING ASSEMBLY
61	1	1	1	1		D3456-1	WASHER
62	1	1	1	1		MS21043-4	NUT
63	2	2	2	2		D3417-5	WASHER

WAS:

50	4	4	1	1		D2736-1	GHW LUG
51	8	8	4	4		AN4-46A	BOLT
52	16	16	8	8		D2570	BUSHING
53	8	8	4	4		MS21042L4	NUT (OR MS21042-4)
54			1	1		D2736-3	GHW LUG
60	1	1	1	1		D2968-041	TOW RING
61	1	1	1	1		AN970-4	WASHER
62	1	1	1	1		MS21042L4	NUT (OR MS21042-4)

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9450	SHEET 2 OF 3
APPROVED	JAY	TITLE	SCALE
DE APPR.		SKIDTUBE INSTALLATIONS	NTS
DATE	09.02.24	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE EXPRESS PERMISSION FROM DART AEROSPACE LTD.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

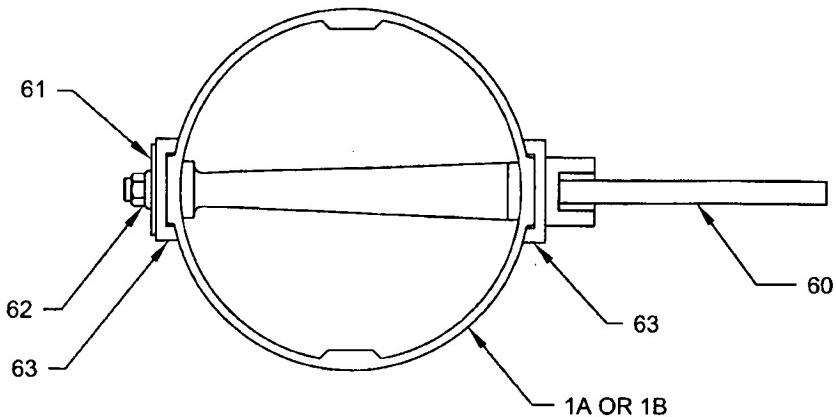
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

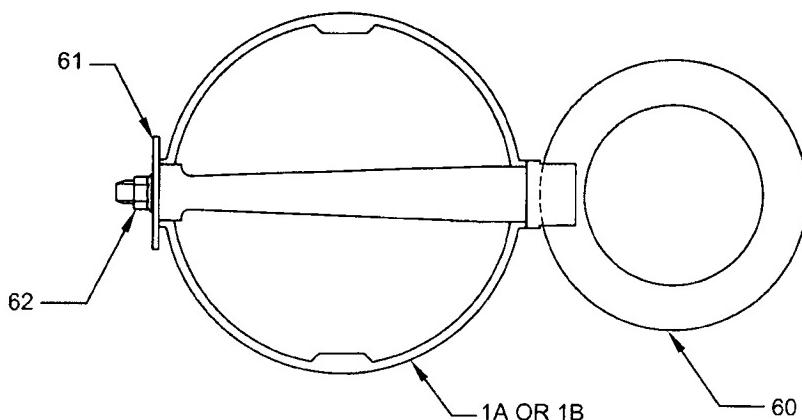
NOTE: Date & initial all entries

INSTALL TOW RING ASSEMBLY AS SHOWN BELOW (REFER TO SECTION F-F OF IIN-D209-669 REV. B.

IS:



WAS:



NO PICTORIAL CHANGE REQUIRED FOR GROUND HANDLING WHEEL LUG CHANGES.

04848

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9450	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE INSTALLATIONS	NTS
DATE	09.02.24	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries